IN THE CLAIMS:

Please amend the claims as follows:

1-8. (Canceled)

9. (Currently Amended) A method, comprising:

depositing a condensed phase matrix material; ~~and~~

activating said condensed phase matrix material to produce a plurality of nanorods by condensed phase conversion and growth from the condensed phase matrix material instead of from vapor;

acquiring data from said plurality of nanorods during activating; and

changing operational parameters of activating using acquired spectroscopic data to optimize said plurality of nanorods,

wherein said condensed phase matrix material includes at least one member selected from the group consisting of carbon, silicon, silicon carbide, germanium, and gallium arsenide and said plurality of nanorods include at least one member selected from the group consisting of carbon, silicon, silicon carbide, germanium, boron nitride and gallium arsenide.

10. (Previously Presented) The method of claim 9, wherein said condensed phase matrix material is deposited by condensing a gaseous phase source of condensed phase matrix material.

11. (Canceled)

12. (Currently Amended) A method, comprising:

depositing a condensed phase matrix material; ~~and~~

activating said condensed phase matrix material to produce a plurality of nanorods by condensed phase conversion and growth from the condensed phase matrix material instead of from vapor;

acquiring data from said plurality of nanorods during activating; and

changing operational parameters of activating using acquired spectroscopic data to optimize said plurality of nanorods,

wherein said condensed phase matrix material includes at least one member selected from the group consisting of carbon, silicon, silicon carbide, germanium, and gallium arsenide and said plurality of nanorods include at least one member selected from the group consisting of carbon, silicon, silicon carbide, germanium, boron nitride and gallium arsenide and

wherein said condensed phase matrix material includes amorphous carbon particles with an average diameter of from approximately 1 nm to approximately 100 nm.

13. (Original) The method of claim 9, further comprising providing a plurality of catalyst particles, wherein activating said condensed phase matrix material includes activating said plurality of catalyst particles to produce a plurality of nanorods by condensed phase conversion growth.

14-16. (Canceled)

17. (Original) The method of claim 9, wherein said condensed phase matrix material is prepared by at least one technique selected from the group consisting of laser ablation, thermal

spray, electric arc, plasma arc, infrared vaporization, microwave vaporization, mechanical grinding, mechanical fracture, explosive vaporization, ion sputtering, electron beam etching.

18. (Original) The method of claim 9, wherein said condensed phase matrix material includes a plurality of solid phase templates and activating said condensed phase matrix material includes activating said plurality of solid phase templates to grow said plurality of nanorods by condensed phase conversion growth from said solid phase templates.

19. (Original) The method of claim 18, wherein said plurality of solid phase templates include nanorods.

20. (Original) The method of claim 18, wherein said solid phase templates include single wall nanotubes.

21. (Original) The method of claim 20, wherein said single wall nanotubes are produced by condensed phase conversion growth and activating said plurality of solid phase templates includes reactivating said single wall nanotubes.

22. (Previously Presented) The method of claim 19, wherein activating said plurality of solid phase templates includes reactivating said plurality of nanorods.

23. (Original) The method of claim 9, wherein said condensed phase matrix material is provided in a pattern of a substrate.

24. (Original) The method of claim 23, further comprising providing at least one catalyst particle on said pattern, wherein activating said condensed phase matrix material includes activating said at least one catalyst particle to transform said condensed phase matrix material into at least one nanorod by condensed phase conversion growth.

25. (Original) The method of claim 9, wherein said condensed phase matrix material is provided in a mold space.

26. (Original) The method of claim 9, wherein said plurality of nanorods include at least one substantially cylindrical nanostructure selected from the group consisting of nanowires, multi-wall nanotubes and single-wall nanotubes.

27-28. (Canceled)

29. (Previously Presented) The method of claim 9, wherein said plurality of nanorods are interrelated to define a substantially random distribution of intersection angles between the plurality of nanorods.

30. (Previously Presented) The method of claim 9, wherein said plurality of nanorods are interwoven.

31. (Previously Presented) The method of claim 9, wherein condensed phase conversion and growth includes solid-state conversion and growth.

32. (Previously Presented) The method of claim 9, wherein activating takes place after depositing.

33. (Previously Presented) The method of claim 9, further comprising placing said plurality of nanorods in contact with a condensed phase feedstock material and annealing to continue growth of the plurality of nanorods.

34. (Previously Presented) The method of claim 12, wherein said plurality of nanorods are interrelated to define a substantially random distribution of intersection angles between the plurality of nanorods.

35. (Previously Presented) The method of claim 12, wherein said plurality of nanorods are interwoven.

36. (Previously Presented) The method of claim 12, further comprising placing said plurality of nanorods in contact with a condensed phase feedstock material and annealing to continue growth of the plurality of nanorods.

37. (Previously Presented) The method of claim 12, wherein condensed phase conversion and growth includes solid-state conversion and growth.

38. (Currently Amended) The method of claim ~~9~~ 12, wherein activating takes place after depositing.